

allowable subject matter and would be allowed if rewritten in independent form. Claim 23 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite, but would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112 and in independent form. Claim 53 is rejected under 35 U.S.C. § 102 as being anticipated by Gzemski.

As noted on the Information Disclosure Statement submitted herewith, Applicant submits additional references which have been cited in a foreign application.

Rejection - 35 U.S.C. § 112

Claim 23 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite. In response, claim 23 is hereby amended as recommended in the office action.

Rejection - 35 U.S.C. § 102

Claim 53 is rejected under 35 U.S.C. § 102(b) as being anticipated by Gzemski. In particular, the rejection is that Gzemski discloses an insulation material having a bituminous composition containing polyurethane polymer which can be applied to an expanded perlite. The coated perlite is distributed onto the frozen substrate by any convenient manner, with the typical coated perlite having a thermal conductivity, "K" factor, of about 0.46 BTU/hr/sq.ft./°F/ in thickness which is greater than the 0.12 recited in claim 1. Col. 11 discloses that this composition can be used on pipelines.¹ This rejection is respectfully traversed.

In response, a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."²

First, claim 53 recites "A pipeline comprising: a pipe and a waterproof insulating layer therearound. . . ." According to the specification, the "invention relates to insulated pipelines, pipeline insulating materials which utilize a bituminous component and particularly to a more cost-effective, insulated offshore pipeline."³ Gzemski fails to disclose or suggest a pipe or a pipeline

¹ Office Action mailed January 26, 1998 at 1-2.

² *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

³ Specification at page 1, lines 5-8.

which is insulated. While, Gzemski does disclose "the structure of [the] invention can also be used for insulating and protecting frozen substrates under heat-emitting superstructures such as buildings, tanks, pipelines and the like,"⁴ so that these structures may securely rest upon a firm foundation comprised of the constantly frozen substrates, there is no suggestion to use the perlite particles to insulate a pipe. Thus, the invention as claimed in claim 53 is not anticipated by Gzemski.

Second, claim 53 recites "a *waterproof* insulating layer . . ." According to the specification, the "invention is directed to a waterproof insulating composition, cost-effective insulated pipelines, and insulating laminate compositions comprising a suitable substrate to which said composition is applied. . . . The insulating material comprises two essential characteristics: (1) it is substantially based on a bituminous material such as coal tar or asphalt, and (2) additives, fillers or modifiers to the bitumen do not greatly raise the thermal conductivity compared to pure bitumen."⁵ Alternatively, Gzemski teaches expanded perlite particles which are coated with a bituminous composition to form coated particles.⁶ The perlite, without the coating, is easily wetted by water and in the bulk form has a tendency to take up and retain water to an extent which seriously adversely effects its insulating properties.⁷ In order to prevent water retention, Gzemski teaches the perlite insulating material is coated with a bituminous material which provides moisture penetration resistance to the particles.⁸ Gzemski does not teach or suggest any means to prevent

⁴ Gzemski at col. 11, lines 8-11.

⁵ Specification at page 5, lines 9-19.

⁶ Gzemski at col. 2, lines 41-44.

⁷ Gzemski at col. 3, lines 47-50.

⁸ Gzemski at col. 3, lines 55-58.

water from passing between the particles. Thus, while Gzemski discloses coating individual particles, it does not teach a *waterproof* insulating layer as claimed in claim 53, so that the invention as claimed is not anticipated by the reference.

Respectfully submitted,

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BY:

William Beard

R. William Beard, Jr.
Registration No. 39,903
FROHWITTER
Three Riverway, Suite 500
Houston, Texas 77056
Phone: (713) 621-0703
Fax: (713) 622-1624
ATTORNEY FOR APPLICANT

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